

Sea Urchin Zone Council Meeting 6 pm, March 21, 2013 in Bangor

DMR staff: Trisha De Graaf, Robert Russell, Linda Mercer, Jay Carroll and Maggie Hunter via phone.

SUZYC members: Bill Sutter, Larry Harris, Joe Leask, Steve Eddy, Brian Preney, Ian Emery, Ed Fagonde, Chris “Buddha” Buyers, Teresa Johnson, William “Killer” Smith, and Chuon Muth.

Public: Yarann Im, Paul Cox, Tristan Smith, M Potts, and Sheldon Dorr.

Welcome

Approval of Minutes (02/21/13)

T. De Graaf – I omitted Yarann Im from public members present, but will update that in final minutes.

Unanimously approved

DMR Updates – Sea Urchin Assessment Results (L. Mercer on M. Hunters behalf; See Appendix A for slides)

Maine Sea Urchin Data Collected by DMR:

- Commercial License Sales – since 1992
- Landings (by NMFS port agents) – to 1996
- Landings from Dealer Logbooks – since 1996-97
- Port Samples and Interviews – since 1994-95
- Spring Survey – since 2001
- Zone 1 Harvester Logbooks – new in 2010-11

Landings peaked in 1992-93 and have since declined due to stock declines, management actions, and harvester and buyer attrition. Zone 1 landed more product than Zone 2 until 1996-97. Note that 2012-13 is incomplete at this time. Landings in recent years have been roughly 60:40 dive:drag. Since this has been a closed fishery since 2004 (no new licenses), some decline in landings is expected. Note that a 52% cut in season days for Zone 2 in 2004 did not result in a 52% cut in landings. 2012-13 numbers are rough guestimates, from data in hand, and include guesses about late data and March 2013 data. Note that reports from two dealers for 2012-13 are still missing, and March 2013 data have not been received yet. This is still a \$5 million fishery, mostly to downeast ME. Note that increased price in 2012-13 made up for reduced volume.

DMR conducted about 114 interviews with divers and 48 interviews with draggers and collected catch samples to weigh and measure during 2012-13. For Catch Per Unit Effort, Red is Zone 1 and Blue is Zone 2. Note that 2012-13 Zone 2 does not include March yet, and all 2012-13 is preliminary (Maggie hasn't proofread the data yet). Also haven't worked up the Zone 1 logbook data for 2012-13 yet. Zone 1 catch/effort has been high the past 4 years; Maggie thinks this may be due to a change in fishing strategy (fishing for volume instead of quality, born out by poorer quality for Zone 1 in recent dealer reports). Zone 2 has been at all time lows the past 3 years. Note that Zone 1 effort may be better matched to the size of its resource than Zone 2. CPUE can be a “one-way” index. That is, if it is going down, stock abundance is probably declining. However, if it is going up, or stable, it could just be that harvesters have found a way to adjust to possibly declining conditions, or have moved to better locations (serial depletion), or there has been attrition of the least successful harvesters (we have evidence of all of these in the urchin fishery). There is quite a bit in the fisheries literature on the subject of “hyperstability” of CPUE indices.

D. Norris – what are error bars (CPUE slide)?

M. Hunter – 80% confidence that point is within that area.

D. Norris – So basically all you can draw from that chart due to the large error bars is that it decreased then stayed low?

R. Russell— right.

B. Sutter – What is the g/m²? Can't you estimate biomass?

L. Mercer – If you showed it in pounds, it would show you the same thing.

B. Sutter – What we are thinking is how much biomass and what we can harvest?

R. Russell – The model will show this.

L. Mercer - For the diver survey, the coastline is divided into 9 regions. We did not survey region 1 in 2012, but instead added more sites to other regions. From the spring survey, Zone 1 has not changed significantly since 2004 while Zone 2 had its lowest value in 2012. There has been no significant long-term improvement in stock conditions in either zone since 2004. All indicators for Zone 2 are low or trending down. Data alone can provide a good measure of where we've been and where we are now, but provide little guidance on where to go from here and how to get there; however, computer simulation models can provide some clues.

Dean— I am reading the same thing I don't see that downward trend.

R. Russell – It is trending down.

D. Norris – There are two ways to interpret the data, let's not mislead folks here. With respect to confidence intervals, you don't have anything to say within those bars. You can't say that it is up or down.

R. Russell – You report everything within a range.

D. Norris – It means the resolution within what is being reported cannot tell you what is happening.

L. Mercer – In 2012, it is the worst year. You can say it is not improving.

D. Norris – yes, you can say that.

R. Russell— It is a far cry from 2001.

L. Mercer – There has been no significant improvement. This is data collected. Now I am going to show the computer model outputs. Sea Urchin Stock Dynamics. Think of this as an annual cycle. The processes on the left cause the stock to grow, and on the right are removals. If the stock is being fished sustainably, at the end of the year there should still be as many urchins, of about the same size, as there were at the beginning of the year. These are the processes that the model simulates. In 2001 Dr. Yong Chen (UME) developed a computer model to model the urchin stock and fishery dynamics. The model provides estimates of exploitable (fishable, legal-sized) biomass. It also provides estimates of biomass 5 years into the future, for different landings levels.

1,154mt is the biomass estimate over time for Zone 1. B_{msy} is a possible reference point for the "best" stock biomass, about one third of the historical max. Note that the model input did not include the 2012 survey or the 2012-13 fishery (yet). Theories on why the biomass increased between 1986 and 1992:

- 1) The stock had been growing for some time, and continued to grow during this period.
- 2) The removal of urchins by the fishery allowed the remaining urchins to be better fed (thinning), which increased the number of good-quality urchins and enhanced growth rates.

The increase reflects, not an increase in the overall number of urchins, but an increase in the number of areas that were being exploited, and thus an increase in the AVAILABLE urchins.

The blue line shows what might happen if there were no fishing: the stock would recover. The red line shows that if landings stay at about 2012-13 levels (~260,000 lbs) the stock would stay about stable. The green line shows a very

gradual stock decline if landings were allowed to reach 441,000 lbs. The black line shows the stock declining quickly if landings were allowed to reach 1,000,000 lbs.

The increase in 2010-2012 is probably because the 2010 survey index was up from the previous year.

Zone 2 has a similar shape with some notable differences... Note that the current Biomass estimate (2,233 mt) is about twice Zone 1's. The model has not seen the 2012 survey (which was down for Zone 2) or the 2012-13 season data so we are working from data that is a year out-of-date. We can assume that overfishing continued to happen in the year the model hasn't seen, so its projections are probably overly optimistic. If fishing stopped (blue line) the stock would recover much more quickly than Zone 1. The red line shows the stock recovering if landings were limited to 551,000 lbs. At 1,000,000 lbs, things are about level, stable. At 1,500,000 lbs, which is the 2012-13 landings level, the stock declines. At 2,145,000 lbs, which is about the 2011-12 landings level, the stock declines.

In conclusion, the model estimates suggest Zone 1 stock may be stable at 2012-13 landings levels, and that Zone 2 stock will continue to decline if 2012-13 landings levels continue.

DMR science staff recommend **no increases in landings or fishing effort for Zone 1**. DMR science staff recommend **at least a 33% reduction in landings or fishing effort for Zone 2, from 2012-13 landings levels of about 1,500,000 lbs (to less than 1,000,000 lbs for 2013-14 or conservation equivalencies)**. Staff also recommend culling on bottom, incentives to fish for quality rather than quantity, and protection of spawners. We are basing our advice on the most recent fishing season the model has "seen", 2011-12.

The model has not seen the Zone 2 survey index for 2012, which was down again. Note that the Zone 2 recommendation may preserve the status quo, but will not rebuild the stock.

Options to Achieve at Least a 33% Reduction for Zone 2 in 2013-14

In 2012-13, Zone 2 divers were required to cull on bottom. From our port interviews, it appears that mortality may have been reduced by, at most, 10% due to culling on bottom. That leaves at least a 23% cut that needs to be made for 2013-14. Culling on bottom: According to 2010-11 port interviews, Zone 2 divers were throwing back 4 trays for every 14 caught. According to 2012-13 interviews, after culling on bottom was implemented, they were throwing back 1.7 trays for every 11.7 caught. So for every 10 trays landed, 11.7 were caught instead of 14. This represents a reduction in mortality of about 16%. Since divers account for about 60% of the Zone 2 landings, this is an overall reduction in mortality of about (.16x.60=) 10%. This assumes that all culled urchins would have died. Also, you could reduce fishing days, Daily tray limits, Improve culling on bottom rates, Other?

Daily Trip Limits

If individual daily catches (from 2011-12 dealer report data) had each been reduced to the following number of trays, a reduction in landings might have been achieved:

Number of trays:	4	5	6	7	8	9	10
% Reduction for Divers	47%	36%	27%	19%	14%	9%	7%
% Reduction for Draggers	45%	35%	27%	20%	15%	12%	9%

Note that the reductions for one diver and one dragger are very similar. Example: If all the catches that were more than 10 trays had been limited to 10 trays, and nothing else changed, there would have been a 7-9% reduction in total landings. Assumes 90 lbs/tray for divers and 95 lbs/tray for draggers. Other tray limit assumptions: Were made from 2011-12 catch data, a year old, when total landings were higher than 2012-13, so may over-estimate the savings. Assumes that catches reduced by tray limits early in the season are not made up later in the season. Assumes no stuffing of trays. Assumes no psychological "fishing up" to the tray limit.

Reduced Fishing Days

Current season was 36 days. More days than that gives negative reductions, or increases. Note that reducing days has not always resulted in reduced catches. A 27-day season might reduce catches by at least 23%.

Possible Reductions in Zone 2 Landings using Reduced Days																				
	Days	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27
Reduction		-25%	-22%	-19%	-17%	-14%	-11%	-8%	-6%	-3%	0%	3%	6%	8%	11%	14%	17%	19%	22%	25%

Mixing and matching these to achieve at least a 23% reduction for Zone 2 with days and trays

44 days, 4-tray limit
40 days, 5-tray limit
37 days, 6-tray limit
34 days, 7-tray limit
32 days, 8-tray limit
31 days, 9-tray limit
30 days, 10-tray limit
27 days, no tray limit

Examples: Say you want a 9-tray limit, which might result in a 10% reduction (from top table). Then need to find the number of days that gives at least a $(23-10=)$ 13% reduction, or 31 days. Say you want a 40-day season, which might result in an 11% increase. Then need to find the number of trays at the top that gives at least a $(23+11=)$ 34% reduction, or 5 trays.

Discussion & Questions:

D. Norris – Has there been any way to measure how well the model has done in the past?

L. Mercer – The problem is that we have not followed what they model has suggested to test the results. Model runs are based on only 2011-12 season.

T. Sawtelle – Do we even know that the model works?

L. Mercer – If you look over time, it has tracked the decline and the little recovering.

T. De Graaf – Also, the model has tracked the survey results, so we can validate it that way.

L. Mercer – harvestable biomass is for Zone 1 is 1,154 mt and Zone 2 2,233mt.

B. Sutter – Total Biomass is 1,154mt, what is exploitable B?

M. Hunter – That is the exploitable biomass.

B. Sutter – So what is the total biomass? Previously we had 800mt for a Zone 1 biomass estimate and Zone 2 was 1,200mt. In Whiting & Denny's Bay in Zone 2 it was estimated that there was 10,000mt with exploitable of 6,000mt, but then it was manipulated to 2,000mt.

R. Russell – You have come back to that several times. You have huge error bars in the estimates for this area as it is based on only 12 dives to come up with a quick idea of what was in there compared to a model with years of data in it.

B. Sutter – I accepted the fact that you manipulated the numbers and cut that available biomass in half.

R. Russell – It was probably not a reasonable estimate of what is in that bay. We did not manipulate the data, we revised it.

T. Sawtelle – What bothers me is that the landings that were reported for what was coming out of that Bay at the last meeting were plain wrong.

T. De Graaf – We don't have harvester landings. Using my counts for the first week of vessel sand totes and then with reports from each week after, I estimate with a rudimentary calculation that approximately 385,000 lbs. were harvested.

J. Leask – Getting to brass tacks, did I see 33% reduction?

L. Mercer – Based on our port sampling data, we figure that a 10% reduction was achieved by culling on bottom.

C. Buyers – If that is true, then why are we even talking about transplanting urchins, you are saying they will all die!

R. Russell – Because reduced and culled on bottom, you saved 10%.

L. Mercer – According to 2010-11 port interviews, Zone 2 divers were throwing back 4 trays for every 14 caught. According to 2012-13 interviews, after culling on bottom was implemented, they were throwing back 1.7 trays for every 11.7 caught. So for every 10 trays landed, 11.7 were caught instead of 14. This represents a reduction in mortality of about 16%. Since divers account for about 60% of the Zone 2 landings, this is an overall reduction in mortality of about $(.16 \times .60 =) 10\%$.

B. Preney – So let me understand this, you are asking them what they throw back in an interview.

R. Russell – Before culling on bottom, 4 trays for every 14 caught. According to 2012-13 interviews, after culling on bottom was implemented, they were throwing back 1.7 trays for every 11.7 caught. So for every 10 trays landed, 11.7 were caught instead of 14.

B. Preney – Anyone here been interviewed?

I. Emery – I have been, multiple times.

C. Muth – They only go to Tenants Harbor in Zone 1.

B. Preney - I am just down from BBH and have never been interviewed.

B. Sutter – The 2012 recommendation was 50% cut, so now 23% for a total of 73%?

L. Mercer – You already achieved some reduction .

B. Sutter - Where does 1 million lbs. come from?

C. Buyers – the model.

B. Sutter – Total or exploitable biomass?

M. Hunter – The model estimates exploitable biomass.

J. Leask – Is this what Pat [Commissioner] recommends?

T. De Graaf – I am going to go over the management recommendations after we are done.

B. Sutter – Total biomass is what, 5 million lbs.? Of which we took 1.5 million. And the model works on?

L. Mercer – It works on estimated biomass, then it projects out where you will go at various harvest rates. If you harvest at 2 million lbs., it will give you the projections.

T. Smith – What is error on that?

D. Norris – Let's just say we cut out Whiting & Denny's Bay and we achieved our goal.

C. Buyers – But if we didn't harvest WDB, we wouldn't have harvested half a million lbs. then we would have been at the target which is around 1million lbs.

D. Norris – The rest of the state had a rest while that was open.

R. Russell – Those pounds have already been landed.

W. Smith – Don't forget that those urchins are all 12%. I rather have a lower amount of urchins with higher yield.

I. Emery – what about tote limits? Could live with 8 totes, but that is what we have now pretty much...

L. Mercer – The model has not seen the most recent year's diver survey results. If those were also in the model, it would be less optimistic. So, for tote limits and days.... Say you want a 9-tray limit, which might result in a 10% reduction. Then need to find the number of days on the left that gives at least a $(23-10=)$ 13% reduction, or 31 days. Say you want a 40-day season, which might result in an 11% increase. Then need to find the number of trays at the top that gives at least a $(23+11=)$ 34% reduction, or 5 trays.

DMR Update – Management Recommendations (T. De Graaf; see slides in Appendix B)

Science recommendation for 23% only preserves the resource, doesn't rebuild and more restrictions will be needed in future years if drastic measures are not taken this year. Marry mobile gear (scallop & urchins) fishery conservation efforts would enhance overall recovery of both species, particularly in regard to Targeted Closures/Refuges and to Maximizing Harvest Opportunities (Days available). Currently, we are not able to comprehensively quantify harvest in Zone 2 as only have dealer reporting – we are not able to "audit" dealer data with harvester data and we do not get area fished from dealer reports. For example, we are not able to accurately account for what was harvested from Whiting & Denny's Bays this past season. Therefore, we recommend marrying some aspects of urchin and scallop management as it would prove effective- targeted closures, maximize harvest season, a Zone 2- 2 year harvester logbook pilot program, considering tote limits – whole and intact urchins, with stackable, standard totes and possibly compact calendar for a steady season.

A. Tamaki – We need a steady supply – most days were short this year. Need sustainable stock but need to supply customers. Recommends more days 44days and 4 tray limit. 4 trays would make you target good stuff.

C. Muth – 4 totes is not enough.

T. Sawtelle – I do not support closing Denny's again and not every area is like Denny's.

T. De Graaf – Also, what about extending the escape panel on the drag.

J. Leask – doesn't support tote limit. Use gear modification. Hold the line. Buyers can't stand further decreases.

B. Sutter – we will get back to this. Right now, Rep Devin has come to talk to us about his bill.

Discussion: Representative Mick Devin's Concept Bill: "An Act to Enable Small-Scale Cooperative Management of the Sea Urchin Resource"

M. Devin - I put in a concept bill. It certainly won't answer all of the issues or questions that Linda and Trish have raised tonight. I understand your frustration, especially what Tracey has said that we have the landings and predictions but can't do things this year because of the process of other things. I appreciate that Trish and Linda's predecessors have worked hard. Potentially, we have a tool that maybe there is a way to make the urchin fishery in your areas a little more profitable for you. I am not promising that anything here will work. I am not interested in fighting the DMR or you guys. If it makes sense for you and the DMR, I am willing to work for you on your behalf in a specific way. Ian, as you know, you have a couple of ideas that were not accepted in the Legislature in the past.

I. Emery – Which one? Getting more days worked in committee, and it fell apart on the floor. The other was the bond issue but was that was derailed by the senate president despite the Governor signing off on it. Concept bills are a very scary thing.

M. Devin – Nothing is going to happen overnight. I am proposing that we set up very specific and small areas. Presently we have very large zones. What I would propose that there are maybe one, two maybe four relatively small zones that a group of fishermen could combine to come up with a specific management plan with a view to do it sustainable and to enhance their profits.

C. Buyers – What is your idea?

I. Emery – he just explained it.

M. Devin – It is to take an area, like the Damariscotta River for example, with very little urchin fishing. At the mouth of the river you set up an area or zone, an area set up that would have a tote limit.

C. Buyers – Is there biomass there now?

M. Devin – It is an example, there is no biomass there. These fishermen are willing to say we are willing to fish that area and not others and enhance that area. Move some rocks around, etc.. to enhance the area.

C. Buyers – Where you going to get urchins?

M. Devin – I don't think it would be wise to have a specific fishermen in a zone.

Public – What would be the benefit?

M. Devin – There are areas that have urchins, possibly of low quality. We closed Whiting & Denny's Bay. Did know what was in there, did look at it before it was opened and what happened?

C. Buyers – They fished it, like Gouldsboro Bay. You're going to take a state resource and give it to you. Can Ed Fagonde take places with plentiful urchins and put them in there?

M. Devin – They have to come up with a plan. Does it make sense to take urchins from other places and put them in there? Maybe not. It would allow people to take the science and combine it into each area. Even though we manage from one end of the zone to the other, we manage it the same way. So, if we would management it at a smaller scale, would that work?

J. Leask – How would this diff from our FMP?

M. Devin – It would allow for more local control. Would allow for the impetus.

B. Sutter – To answer Buddha's [C. Buyers] questions, you are talking about moving urchins. It would work in Zone 2. In Zone 1, it would require hatchery urchins.

C. Buyers – Your just saying you want to give fishermen lease bottom.

B. Sutter – Yes, but on a bigger level. I don't think anyone would agree about taking wild product and then putting in on leased bottom.

M. Devin – I am not coming to you with any specific ideas. I have heard many ideas over the years. What I am proposing is taking your knowledge to develop specific zones. I am not looking to privatize bottoms, or to take advantage of one area at the expense of the other.

B. Sutter – We had a lot of that discussion earlier in the evening. When the legislature gets around to hearing about this, it would be beneficial if the SUZC would recommend that these are the tools that would need to exist.

A. Tamaki – This idea is similar to the Japanese fishery. Each town belongs to the core and works an area.

M. Devin – I have been to Aikido and I have seen the areas become very profitable.

A. Tamaki – I just don't know how it would work here.

C. Muth – It is different from Japan or Canada- you license to a captain, which is a different story. Right now everybody would go everywhere. If I had a 10 mile stretch that no one could go into, that is different; it would be a more expensive zone. You buy back all the urchin licenses and then sell the zones back to someone for the highest price.

D. Norris – Some of the zones got stripped to nothing. I have seen the entire New Brunswick bottom and there is nothing left on the bottom. You harvest the cream and move on. If you harvest to death, you won't do well. There are a lot of people who fish their backyard and wouldn't think about going down the coast. People like to neglect the bad parts of management and not acknowledge the good. Whiting & Denny's Bay was closed at the right time as I surveyed that and there was a lot of the small stuff that grew up.

T. Sawtelle – I think that you are more apt to take care of your bottom. Let's talk about scallops, they move around and rape the bottom. I think you make the zones smaller; I don't care about what fishery.

B. Sutter – What about lobster zones?

C. Buyers – Some zones don't have urchins.

B. Sutter – They will all go to the zone with the most urchins.

M. Devin – You throw in the idea of what happens with the clamming. In order to clam a certain area you have to put in conservation time.

C. Buyers – If there was management that you could do. What can you do!?

M. Devin – Move urchins.

C. Muth – Urchins you can only move so far.

T. Sawtelle – Half a mile.

C. Buyers – You are supposed to dump them on site.

M. Devin – They are looking at areas and leave it alone and go back at a later date.

C. Buyers – Is there anyone that moves urchins that they don't keep, sellable urchins?

J. Leask – I do.

B. Sutter – The 23% recommendation is for a 36 day season and a 6 tote limit. Then next year you will have more and more cuts to follow that.

I. Emery – If you go to the legislature it will go in one way and come out worse. We have a council; we have some new data that needs to go into the model. If you want to look at history and this council and we have been following the

recommendations of the state and what we need to do and reduce effort and to this point that hasn't worked. To look at a concept bill that looks to us to put the meat on the bones, I don't think that will improve our biomass. I don't see anything here but wind and fluff.

B. Sutter – You have Zone 1 where there is no fishery and no urchins. What are we going to do to increase that to keep the processors in business? Zone 1 [2?] is at a point where you need to do something to survive. From what I see today, it is going to be a continuing ratcheting down because it is continuing to decrease, except for Whiting & Denny's Bay. Unless you management that localized place, you will have what happened in Whiting & Denny's Bay and have half a million pounds harvested.

I. Emery – The Department has the ability to implement restrictions on our harvesting effort.

B. Sutter – But what do you have in Zone 1 if there has been no real fishery and nothing has come back? We want to do something and make it productive. In some places in Japan they have a put and take fishery, but we need legislation to do that. If nothing there, you need to enhance that.

I. Emery – You are talking about protecting it for an exclusive group of people. Areas where I fish is some of the most productive areas and they are very small in size. You don't need a bay, just a small area.

B. Sutter – Would you rather a small aquaculture lease to one individual or a larger area to a group of people?

T. Smith – smaller.

I. Emery – I don't believe that the Legislature could take a historical area and make it exclusive.

B. Sutter – Anyone can join, but they can't fish anywhere else.

W. Smith – Sounds like this is the end of the urchins. If you move urchins they will die. If Mother Nature can't make them grow there, we can't make them grow there. We spent millions of dollars already trying to do this and they died.

M. Devin – I am not talking about moving sea urchins. I am talking about coming up with ideas to make something work in a specific areas.

W. Smith – You would need a lot of hatcheries. That is a lot of rules and regulations. If there is a lack of urchins it won't kill industry, rules and regulations will.

E. Fagonde – What you are putting out there is broad. The Legislation will get twisted.

M. Devin – The reason I am sitting here and not in the legislature is that I want to work with you.

C. Buyers – why can't we work with the DMR to do that?

M. Devin – We have been working with DMR since 1998 and what has happened?

C. Buyers – We used to sell to 11 buyers, now there are 5. If you can't keep them going, it will collapse.

M. Devin – How do you keep those guys harvesting?

C. Buyers – You need more product, and DMR says you are going to get less.

C. Muth – Then we are shut down.

C. Buyers – All you can say is meet with processor and compact what is left, source from other places. Otherwise, they will shut down.

B. Sutter – There are places that it could work.

C. Muth – We could try, but we need a larger area. Each processor picks a zone, and there are a total of 5 zones. Then the harvesters pick a zone to fish in.

C. Buyers - This council is made up of people who are protecting their interests and always has been like that.

C. Muth – With what DMR is telling us, we will be out of business. The buyers this year were losing money just to get through season to try to get some days back next year.

C. Buyers - When one or two buyers drop out, then the remaining urchins processors will stop paying those inflated prices.

R. Russell – There is an FMP Bill also. Will this mess that up?

M. Devin – I am introducing that bill. It is for all fisheries.

T. De Graaf – The FMP bill is a Department bill which would standardize all the FMPs in a similar format, but the language directs the DMR to work with the species specific councils, such as this one, to develop the specifics, such as the goal and objective setting we have already accomplished.

L. Mercer – DMR can regulate through time, location, etc. We can't get rid of zones, limit entry. Mick's Bill could allow for that, it could be that vehicle.

MOTION

B. Preney moved that Mick withdraw bill (I. Emery seconded) and the concept be put on the Council agenda indefinitely until the concept is fleshed out.

Discussion:

T. Sawtelle - likes the idea of smaller management areas. Could vary gear design or # of totes within them.

D. Norris – Concern about how the bill might be changed in the Legislature.

S. Eddy – Sees that the fishery is in a downward spiral and seeding has never happened on a large scale and some seeding of discrete areas is worth trying. It won't happen if a group of fishermen don't want to go ahead with it.

A. Tamaki – This works in Japan and it is a sustainable fishery.

T. Johnson – The scale of current management hasn't matched the scale of the fishery. Should be an opportunity for more localized management.

J. Leask – Can we do an FMP and this bill at the same time? Can we tie them together?

C. Buyers – Has seen bills get changed. Should do the FMP and leave it at that.

L. Harris – There are things that cannot be done right now and it may be a year or two before the plan is done and then need to have the enabling legislation – it may be too late.

E. Fagonde – I am concern about what would come out of it. Need to discuss it a lot more.

I. Emery – There is not enough on the bones to feel comfortable moving forward. We may come up with some ideas with further discussion.

C. Muth – We need more days back to stay in business.

Vote: 7 in favor of withdrawal, 2 in opposed, 3 abstentions (PASSED)

MOTION

B. Preney moved that this council recommends to Mick Devin to request a carry-over until next year. D. Norris seconds.

Vote: 12 in favor, 1 opposed-0 abstentions (PASSED)

T. De Graaf – This is an opportunity for the Council and industry to do something and I am willing to do the leg work with industry and this council to find common ground and support for whatever is developed.

Next meeting

April 4 at 5pm at Ellsworth City Hall – 2013/14 season recommendation will be made at this meeting

Adjourned at 9:30pm.

Appendix A

2011-12 Sea Urchin Assessment Slides, Presented by Linda Mercer

Maine Sea Urchin Stock Assessment

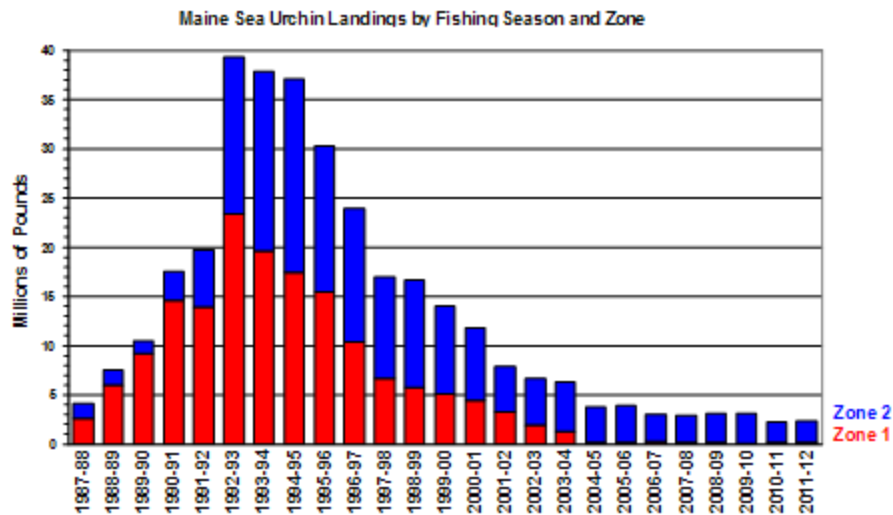
March 21, 2013



www.maine.gov/dmr

Maine Sea Urchin Data Collected by DMR

- Commercial License Sales – since 1992
- Landings (by NMFS port agents) – to 1996
- Landings from Dealer Logbooks – since 1996-97
- Port Samples and Interviews – since 1994-95
- Spring Survey – since 2001
- Zone 1 Harvester Logbooks – new in 2010-11



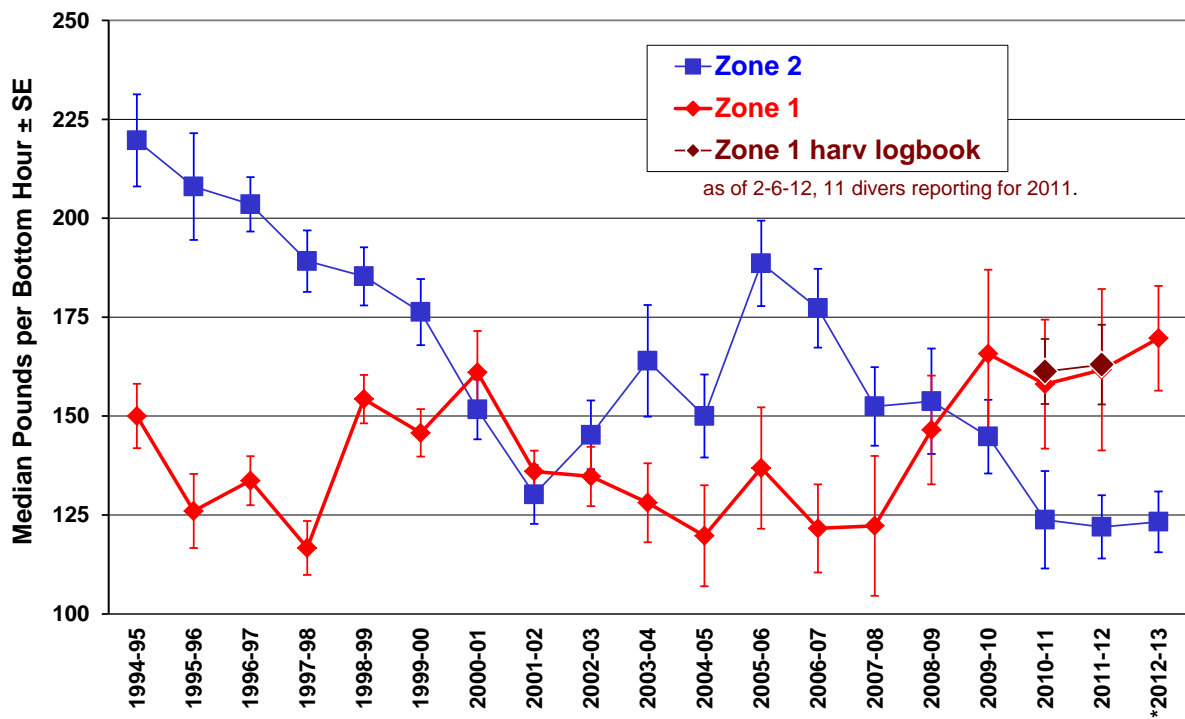
Maine Sea Urchin Landings by Season and Zone					
	Pounds			Value	Price
Season	**Zone 1	Zone 2	Total	\$	\$/lb
2003-04	1,293,602	5,040,920	6,334,522	8,860,609	1.40
2004-05	181,343	3,605,753	3,787,096	5,802,979	1.53
2005-06	176,302	3,676,603	3,852,905	5,371,416	1.39
2006-07	225,732	2,803,759	3,029,491	4,581,572	1.51
2007-08	196,781	2,752,447	2,949,228	4,860,788	1.65
2008-09	138,683	2,960,823	3,099,506	5,089,928	1.64
2009-10	121,710	2,991,471	3,113,181	5,902,851	1.90
2010-11	148,767	2,152,866	2,301,633	5,143,371	2.23
2011-12	181,226	2,149,873	2,331,099	5,081,370	2.18
*2012-13	260,000	1,500,000	1,760,000	5,280,000	3.00
<i>* very preliminary estimates</i>					

Port Sampling Interviews

DMR conducted about 114 interviews with divers and 48 interviews with draggers and collected catch samples to weigh and measure during 2012-13.



Maine Sea Urchin Diver Catch/Effort by Season and Zone

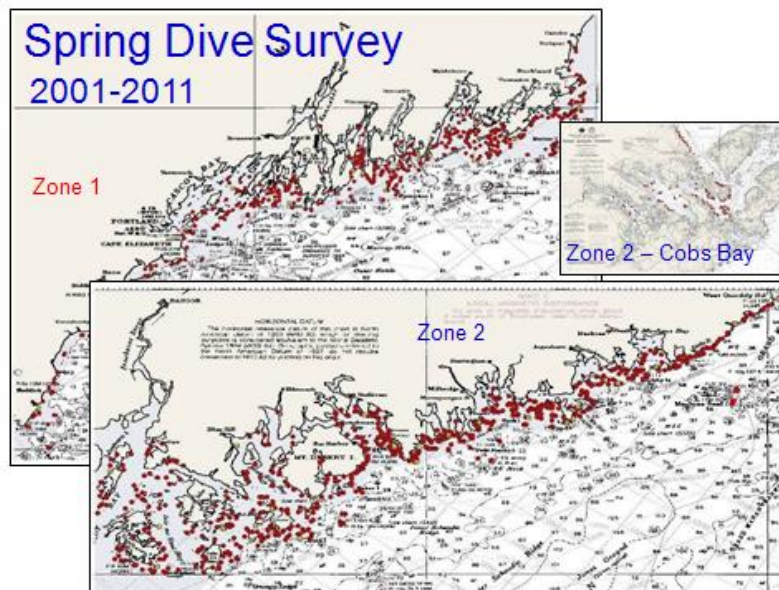


*2012-13 port interview data are preliminary, and Zone 2 does not include March yet

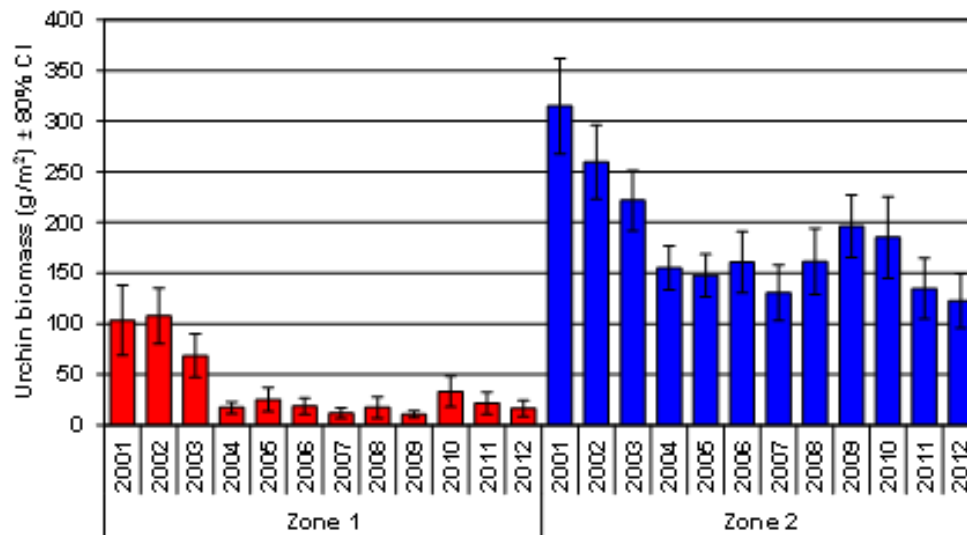
Spring Dive Survey



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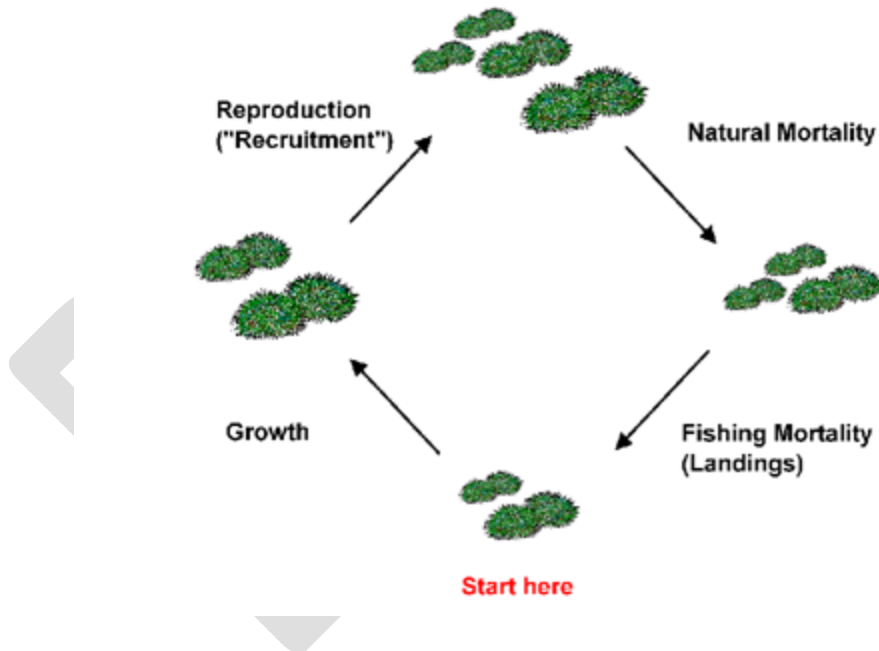
Mean Sea Urchin Biomass by Zone and Year



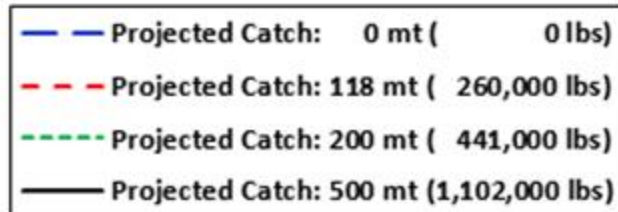
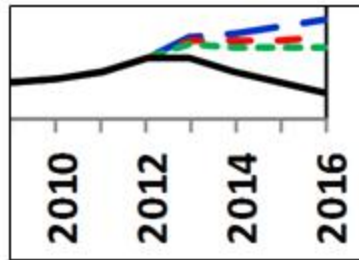
Summary, Part 1

- There has been no significant long-term improvement in stock conditions in either zone since 2004.
- All indicators for Zone 2 are low or trending down.
- Data alone can provide a good measure of where we've been and where we are now, but provide little guidance on where to go from here and how to get there; however, computer simulation models can provide some clues.

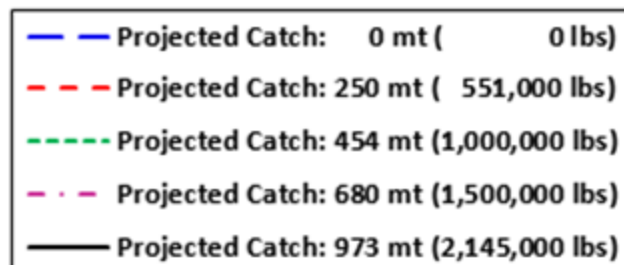
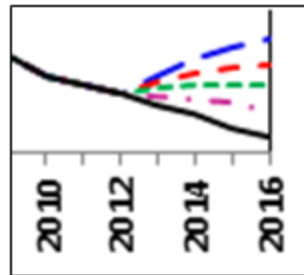
Sea Urchin Stock Dynamics



Stock Dynamics for Zone 1 with 5-year Landings Projections



Stock Dynamics for Zone 2 with 5-year Landings Projections



Conclusions and Recommendations

- Model estimates suggest Zone 1 stock may be stable at 2012-13 landings levels, and that Zone 2 stock will continue to decline if 2012-13 landings levels continue.
- DMR science staff recommend **no increases in landings or fishing effort for Zone 1.**
- DMR science staff recommend **at least a 33% reduction in landings or fishing effort for Zone 2, from 2012-13 landings levels of about 1,500,000 lbs (to less than 1,000,000 lbs for 2013-14 or conservation equivalencies).**
- Staff also recommend culling on bottom, incentives to fish for quality rather than quantity, and protection of spawners.

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Options to Achieve at Least a 33% Reduction for Zone 2 in 2013-14

- In 2012-13, Zone 2 divers were required to cull on bottom. From our port interviews, it appears that mortality may have been reduced by, at most, 10% due to culling on bottom.
- That leaves at least a 23% cut that needs to be made for 2013-14.

Options to Achieve at Least a 23% Reduction for Zone 2 in 2013-14, as compared with 2012-13

- Reduce fishing days
- Daily tray limits
- Improve culling on bottom rates
- Other?

Daily Tray Limits

If individual daily catches (from 2011-12 dealer report data) had each been reduced to the following number of trays, a reduction in landings might have been achieved:

Number of trays:	4	5	6	7	8	9	10
% Reduction for Divers	47%	36%	27%	19%	14%	9%	7%
% Reduction for Draggers	45%	35%	27%	20%	15%	12%	9%

Reduced Season Days

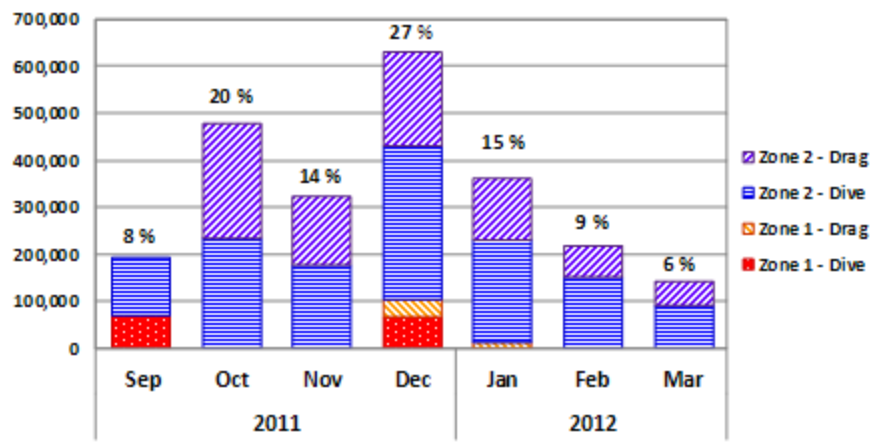
Days	Reduction
45	-25%
44	-22%
43	-19%
42	-17%
41	-14%
40	-11%
39	-8%
38	-6%
37	-3%
36	0%
35	3%
34	6%
33	8%
32	11%
31	14%
30	17%
29	19%
28	22%
27	25%

		Number of trays:	4	5	6	7	8	9	10
Days	Reduction	Average reduction for divers and draggers	46%	36%	27%	20%	14%	10%	7%
45	-25%								
44	-22%								
43	-19%								
42	-17%								
41	-14%								
40	-11%								
39	-8%								
38	-6%								
37	-3%								
36	0%								
35	3%								
34	6%								
33	8%								
32	11%								
31	14%								
30	17%								
29	19%								
28	22%								
27	25%								

Mixing and matching these to achieve at least a 23% reduction for Zone 2 with days and trays:

- 44 days, 4-tray limit
- 40 days, 5-tray limit
- 37 days, 6-tray limit
- 34 days, 7-tray limit
- 32 days, 8-tray limit
- 31 days, 9-tray limit
- 30 days, 10-tray limit
- 27 days, no tray limit

2011-2012 Maine Sea Urchin Landings (lbs) by Month, Zone, and Gear



Appendix B

2013-14 management Recommendations

2013-14 Season Management Recommendations

Science recommendation would PRESERVE & NOT REBUILD

- Will likely have additional restrictions in coming years if drastic measures not taken this year

Marry mobile gear (scallop & urchins) fishery conservation efforts would enhance overall recovery of both species

- Targeted Closures/Refuges
- Maximizing Harvest Opportunities (Days available)

Currently, not able to comprehensively quantify harvest in Zone 2 as only have dealer reporting

- Not able to “audit” dealer data with harvester data
- Do not get area fished from dealer reports
 - Not able to accurately account for what was harvested from Whiting & Denny’s Bays this past season

2013-14 Season Management Recommendations

AT LEAST 23% Reduction of Effort

- Will only PRESERVE resource, not rebuild
 - Additional measures could provide a buffer & aid in recovery
 - Targeted closures & refuges
 - Escape panel on entire back of drags
 - Decrease tolerance of culled urchins (ie from 20 to 10%)

Zone 2 Harvester Logbook Pilot Program

Tote Limits

- Regulatory language “whole & intact”, stackable standard totes
 - No stuffing or crushing, ~90 lbs./tote
 - Based on Marine Patrol advise from Whiting & Denny’s Bay

Compacting the season

- 3 vs. 4 months OR greater overlap
 - Provide for more access to Whiting & Denny’s Bay
 - Ensure “consistency” of product on market in Japan